Is coronectomy really preferable to extraction?

We have recently seen several articles in this and other journals that propose the use of coronectomy instead of extraction of lower third molars with radiological evidence of proximity to the inferior alveolar nerve. However, I think that coronectomy is being proposed without adequate evaluation of its long-term risks (notably apical periodontitis associated with necrosis of the pulp, which could potentially affect the inferior alveolar nerve).

Firstly, I congratulate Renton et al. on their well-designed clinical trial. However, I query their conclusion that their results support the use of coronectomy in cases of this type. It is certainly true that the inferior alveolar nerve was damaged in 19% of 102 extractions compared with only 3% of 94 coronectomies (58 successful coronectomies, no lesions, and 36 failed coronectomies resolved by extraction, 3 lesions). However, only 2 of the 22 nerve lesions were classifiable as permanent (i.e. still manifest 6 months later). The authors do not specify in which group/s these 2 lesions occurred: but in any case, they constitute an incidence of only 1.5% (of the total of 102 + 36 extractions), and if we take this as the relevant figure, the putative benefit of coronectomy becomes less clear. Does this apparent slight reduction in the risk of a permanent nerve lesion outweigh the possible long-term risks of coronectomy (which, as noted, include neuropathy)?

Independently of the above, an interesting conclusion that can be drawn from the study by Renton et al. is that in cases of this type (radiological evidence of proximity to the inferior alveolar nerve), if the apex of the root breaks during the extraction – as occurs fairly often – then it should probably not be removed, as there is then a considerable risk of damage to the nerve.

In summary, the study by Renton et al. and other recently published similar ones do *not* justify the routine use of coronectomy in cases of this type. However, these results suggest that if the apex of the root breaks during the extraction, it should probably not be removed.

DrorBooks